

Pibox Home - Général informations



Context informations

In the context of the global digital development in Solvay, the R&I laboratories have identified that they need a solution to have global data acquisition solution, this solution must have some control lab equipment, automation functionalities.

Pibox Project is followed by :

- Barthélémy PINSON as Project Leader
- Romain CLERC as Digital Analyst for IOT hub
- Thomas CLERICO as Automation & Robotics manage

Pibox is a Data acquisition / automation solution based on a raspberry pi and the opensource software Node-Red.

Lab equipment such as pumps, heaters, stirrers, temp probe... can be connected to Pibox through RS232 / Modbus connection for controlling them or acquire their data.

Some functionalities can also run simple automation like pH regulation, Mass flow calculation, delay for starting a lab device...

Pibox can also send these Data in an IOT HUB (data base) with Google cloud platform through a connection to the WIFI Solvay network.

a Webcam can also be plugged on the Pibox for viewing / recording only live images.

3. Informations details please find all link used for Pibox Project below :

1- Pibox Website : general informations and tutorials for users

<https://sites.google.com/syensqo.com/pibox>

2- Shared drive folder for Pibox :

https://drive.google.com/drive/folders/1mbul6G-70pQb3SmN0e_p9oiOAa-4XYrA?usp=sharing

in this folder you will find :

- technical documentation for the development with Raspberry and node red
- process documentation for any installation/management of Pibox
- code and SD images
- data sheet for lab devices
- all presentation about the project

3- IOT

Pibox use the Solvay IOT platform and you will find the links for manage IOT.

1-bigQuery data base :

<https://console.cloud.google.com/bigquery?>

2-IOT devices Platform:

iohub.syensqo.com

3-Grafana for remote visualization :

<https://grafana.syensqo.com/login>

4- Key Performance indicator

<https://qliksensedev.syensqo.com/sso/sense/app/7c8010cc-c270-4595-b13f-28f98777b342>

5 -Code Repository

<https://gitlab.syensqo.com/solvay-anr/project/europe/anr/pibox>

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